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A ladder accessory

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ABSTRACT

An accessory for a ladder includes a body member mountable adjacent an outer wall of a gutter. The body member defines a bearing surface against which the ladder bears. A locating formation extends from the body member to be received in the gutter to bear against an inner wall of the gutter to locate the body member with respect to the gutter. Fasteners are carried by the body member for releasably fastening the ladder to the body member. A positioning device is arranged on the body member for positioning the body member with respect to the gutter.

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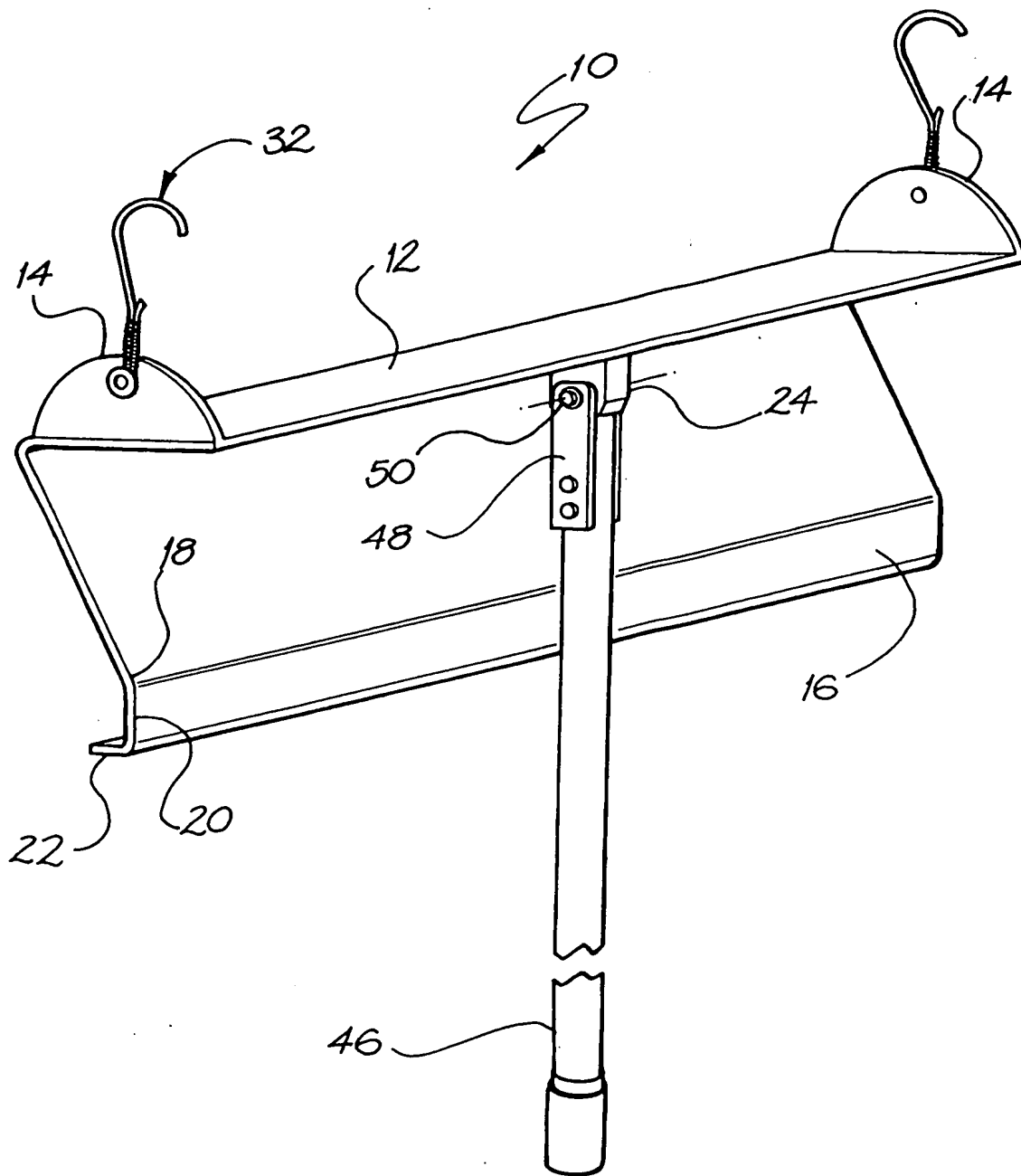


FIG. 2

AUSTRALIA
Patents Act 1990

Ladder Safe Pty Limited

ORIGINAL

**COMPLETE SPECIFICATION
STANDARD PATENT**

Invention Title:

A ladder accessory

The following statement is a full description of this invention including the best method of performing it known to us:-

Field of the Invention

This invention relates to an accessory for a ladder.

Background to the Invention

Gutters of buildings require regular maintenance. For this purpose, access to the gutter is normally achieved by placing a ladder against the gutter. If the gutter is in disrepair or the substrate on which the ladder is placed is uneven or not firm, the ladder may slip relative to the gutter which could cause injuries to a person on the ladder. Local councils increasingly require that the ladder be attached in some manner to the building.

The invention is designed to restrict the movement of the ladder when the ladder is positioned against the gutter. The invention is a ladder accessory designed to afford the user safer access to the roof area to carry out general roof maintenance. As well as allowing maintenance to be carried out on the gutters and roof, it also protects the gutters against damage arising from the ladder pressing directly against and distorting the gutter.

Summary of the Invention

According to the invention, there is provided an accessory for a ladder, the accessory including:

- a body member mountable adjacent an outer wall of a gutter and defining a bearing surface against which the ladder bears, in use;
- a locating formation extending from the body member to be receivable in the gutter to bear against an inner wall of the gutter to locate the body member with respect to the gutter;
- a fastening means, carried by the body member, for releasably fastening the ladder to the body member; and
- a positioning means arranged on the body member for positioning the body member with respect to the gutter.

It will be appreciated that, in a vertical section, a gutter is substantially channel-shaped having side walls interconnected by a bridging floor portion. The gutter is, in use, normally mounted below an overhang of a roof. One side wall of the gutter bears against a fascia or is received inwardly of an edge of the roof with the other side wall of the gutter being spaced outwardly of an edge of the roof. In this specification the term "inner wall" refers to that

wall of the gutter which, in use, is arranged inwardly of the edge of the roof. Conversely, what is referred to as the "outer wall" of the gutter refers to that wall spaced outwardly of the edge of the roof.

5 The positioning means may define a pivot axis about which the body member can pivot, the positioning means being positioned on the body member such that, when unrestrained, the body member and the locating formation can pivot about the pivot axis such that the locating formation hangs downwardly. In other words, the centre of gravity of the accessory is such that the locating formation swings downwardly when the accessory is
10 held aloft by the positioning means.

In one embodiment of the invention, the positioning means may include a lug projecting outwardly from a surface of the body member
opposed to the bearing surface, the lug having a passage defined
therethrough, an axis of the passage defining the pivot axis. In this
15 embodiment of the invention, a manipulating means, such as a long handle with a hook on the end may be releasably attached to the positioning means. The accessory is then lifted into the air to the height of the gutter. In this position, the locating formation, hanging downwardly, is inserted into the gutter and the accessory is drawn downwardly such that the locating
20 formation seats snugly in the channel of the gutter.

In another embodiment of the invention, the positioning means may include the manipulating means, which, once again, may be in the form of a handle, pivotally secured to the lug by a pivot pin received in the passage. The handle may be a telescopic handle.
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In a preferred embodiment of the invention, the body member comprises a planar element defining the bearing surface and an attachment formation arranged at each end of the planar element. Each attachment formation may be in the form of an ear.

30 One fastening means may be arranged on each of the attachment formations.

Each fastening means may be in the form of a resiliently flexible member for securing the ladder to the accessory. Instead, each fastening means may be an articulated, bent arm.

35 The attachment formations may project from one side of the planar element. Then, the locating formation may comprise a leg projecting from a side of the body member opposite its bearing surface.

The leg may be shaped to pass over a lip of the outer wall of the gutter to be received in the channel of the gutter and to bear against the inner wall of the gutter so that a force exerted by a ladder, and a person on the ladder, in use, is transferred to an inner wall of the gutter. Where the inner wall of the gutter bears against a part of a structure, such as a fascia, the force is,
 5 accordingly, exerted against the fascia thereby protecting the gutter.

Brief Description of the Drawings

10. The invention is now described by way of example with reference to the accompanying drawings in which:-

Figure 1 shows a perspective view of an accessory, in accordance with a first embodiment of the invention, for a ladder;

Figure 2 shows a perspective view of an accessory, in accordance with a second embodiment of the invention, for a ladder; and

15 Figure 3 shows a schematic, side view of the accessory of Figure 2, in use.

Detailed Description of the Invention

20 In the drawings, reference numeral 10 generally designates an accessory, in accordance with the invention, for a ladder. The accessory 10 comprises a body member in the form of a substantially planar element 12. A pair of ears 14 project from one side of the planar element 12. An ear 14 is arranged at each end of the planar element 12.

25 A locating formation in the form of a leg 16 projects from an opposed side of the planar element 12 to be received in a channel 32 (Figure 3) of a gutter 34. The leg 16 has a substantially dog leg shape to define a knee 18. Outwardly of the knee 18, a planar portion 20 abuts against a floor of the channel 32 of the gutter 34 in use. An upturned lip 22 is arranged along an edge of the portion 20. This lip 22 bears against an inner surface of an inner
 30 wall 36 of the gutter 34 to stabilise the accessory 10 in position relative to the gutter 34, in use. As illustrated more clearly in Figure 3 of the drawings, the lug 16 is dimensioned such that the planar element is held in spaced relationship with respect to an outer wall 38 of the gutter 34. The lug 16 passes over a lip 40 of the gutter 16. As a result, when a ladder 42 bears
 35 against the accessory 10 received in position relative to the gutter 34, a force exerted by the ladder 42, and, in use, a person on the ladder 42, is transferred

by the lug 16 of the accessory 10 to the inner wall 36 of the gutter 34 and, accordingly, a fascia 44 against which the gutter 36 is mounted.

In the embodiment of the invention illustrated in Figure 1, a carrying formation in the form of a lug 24 projects from that surface of the planar element 12 from which the leg 16 projects. The lug 24 has an opening or passage 26 defined therethrough, the passage 26 having an axis extending parallel to the planar element 12. A suitable device (not shown) is inserted into the passage 26 for lifting and manoeuvring the accessory 10 into position relative to the gutter 34, prior to use.

A fastening means in the form of a resiliently flexible member such as a length of shot cord 28 is releasably secured, by an engaging hook 30, to each ear 14. A hook 32 is carried at a free end of each length of shot cord 28 for fastening to the ladder 42 for securing the ladder 42 to the accessory 10, in use.

The accessory 10 may, conveniently, be a moulding of a suitable plastics material.

In use, a long pole with a hook at the distal end engages the opening 26 and the accessory 10 is raised into position above the gutter with the leg 16 hanging down above the gutter 34. The leg 16 is then lowered into the channel 32 of the gutter 34 and the accessory 10 is manipulated so that the leg 16 enters the gutter 34 such that the planar element 12 is spaced from the outer wall 38 of the gutter 34 with the lip 22 of the leg 16 bearing against an inner surface of the inner wall 36 of the gutter 34 to stabilise the accessory 10 in position relative to the gutter 34 and to effect a locking action of the accessory 10 in position relative to the gutter 34. The ladder 42 is raised into position to bear against the outer surface of the planar element 12. The ladder is secured in that position by means of the lengths of shot cord 28.

In Figures 2 and 3 of the drawings, another embodiment of the invention is shown. With reference to Figure 1 of the drawings, like reference numerals refer to like parts, unless otherwise specified.

In this embodiment of the invention, the accessory 10 includes a manipulating means in the form of a telescopic pole or post 46. The post 46 is secured via a connector 48 to the lug 24. The connector 48 has a pivot pin 50 which is received in the passage 26 of the lug 24 for pivotally securing the post 46 to the planar element 12 of the accessory 10. As illustrated in Figure 2 of the drawings, when the accessory 10 is raised into position relative to a

roof 52 (Figure 3) of the structure, the centre of gravity of the accessory 10 is such that the leg 16 hangs downwardly. As described above, the leg 16 is inserted into the channel 32 of the gutter 34 and the accessory 10 is lowered so that the leg 16 bears against the lip 40 on the outer wall 38 of the gutter 34. This, effectively, wedges the accessory 10 in position relative to the gutter 34 to locate the accessory 10 and inhibit slipping thereof relative to the gutter 34.

It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An accessory for a ladder, the accessory including
 - a body member mountable adjacent an outer wall of a gutter and defining a bearing surface against which the ladder bears, in use;
 - 5 a locating formation extending from the body member to be receivable in the gutter to bear against an inner wall of the gutter to locate the body member with respect to the gutter;
 - a fastening means, carried by the body member, for releasably fastening the ladder to the body member; and
 - 10 a positioning means arranged on the body member for positioning the body member with respect to the gutter.
2. The accessory of claim 1 in which the positioning means defines a pivot axis about which the body member can pivot, the positioning means being positioned on the body member such that, when unrestrained, the body
 - 15 member and the locating formation can pivot about the pivot axis such that the locating formation hangs downwardly.
3. The accessory of claim 2 in which the positioning means includes a lug projecting outwardly from a surface of the body member opposed to the bearing surface, the lug having a passage defined therethrough, an axis of the
 - 20 passage defining the pivot axis.
4. The accessory of claim 3 in which the positioning means includes a manipulating means pivotally secured to the lug by a pivot pin received in the passage.
5. The accessory of any one of the preceding claims in which the body
 - 25 member comprises a planar element defining the bearing surface and an attachment formation arranged at each end of the planar element.
6. The accessory of claim 5 in which each attachment formation carries one of the fastening means.
7. The accessory of any one of the preceding claims in which the locating
 - 30 formation comprises a leg projecting from a side of the body member opposite its bearing surface.
8. The accessory of claim 7 in which the leg is shaped to pass over a lip of the outer wall of the gutter to be received in a channel of the gutter and to bear against the inner wall of the gutter so that a force exerted by a ladder,
 - 35 and a person on the ladder, in use, is transferred to the inner wall of the gutter.

9. An accessory for a ladder substantially as described herein with reference to the accompanying drawings.

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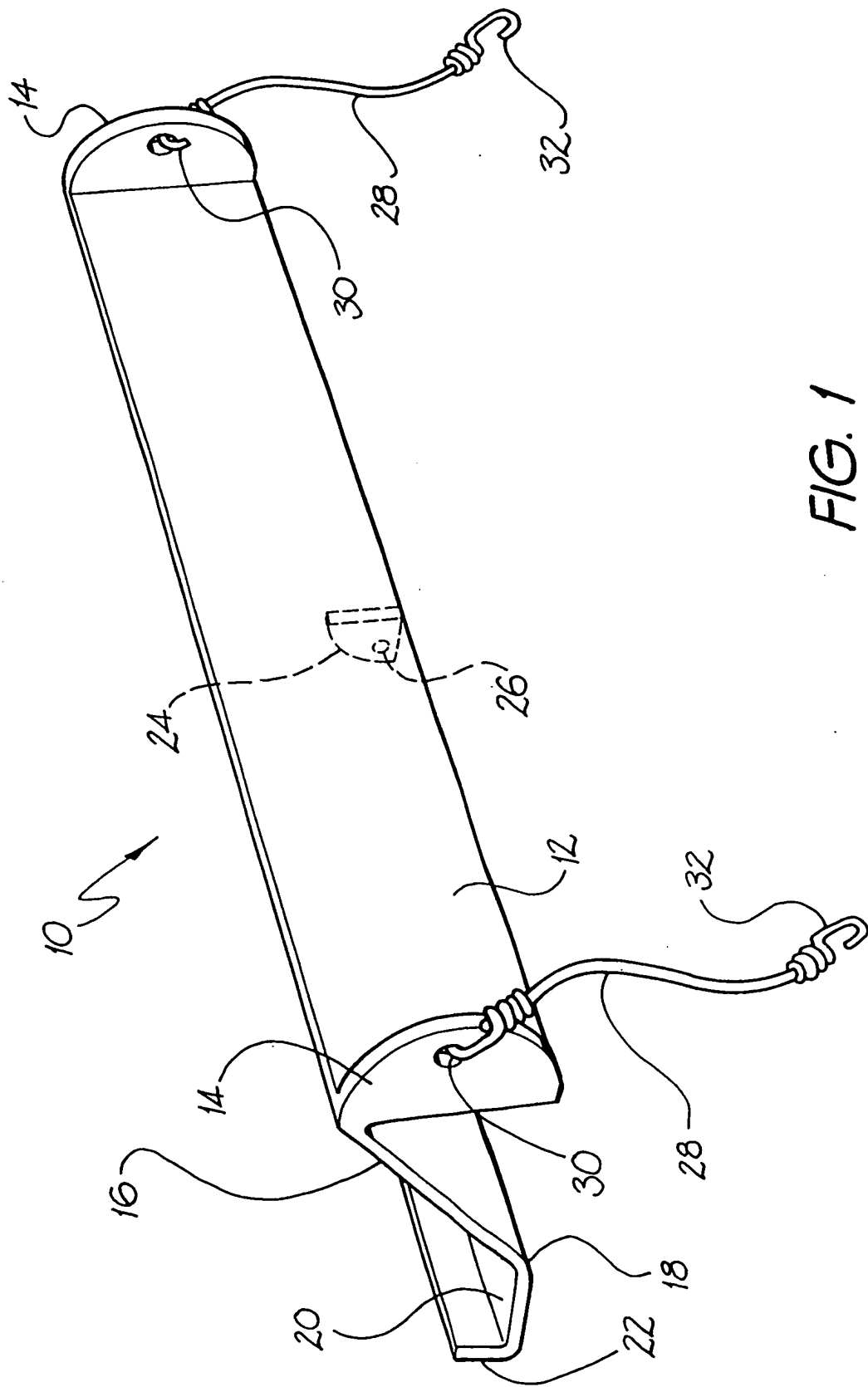


FIG. 1

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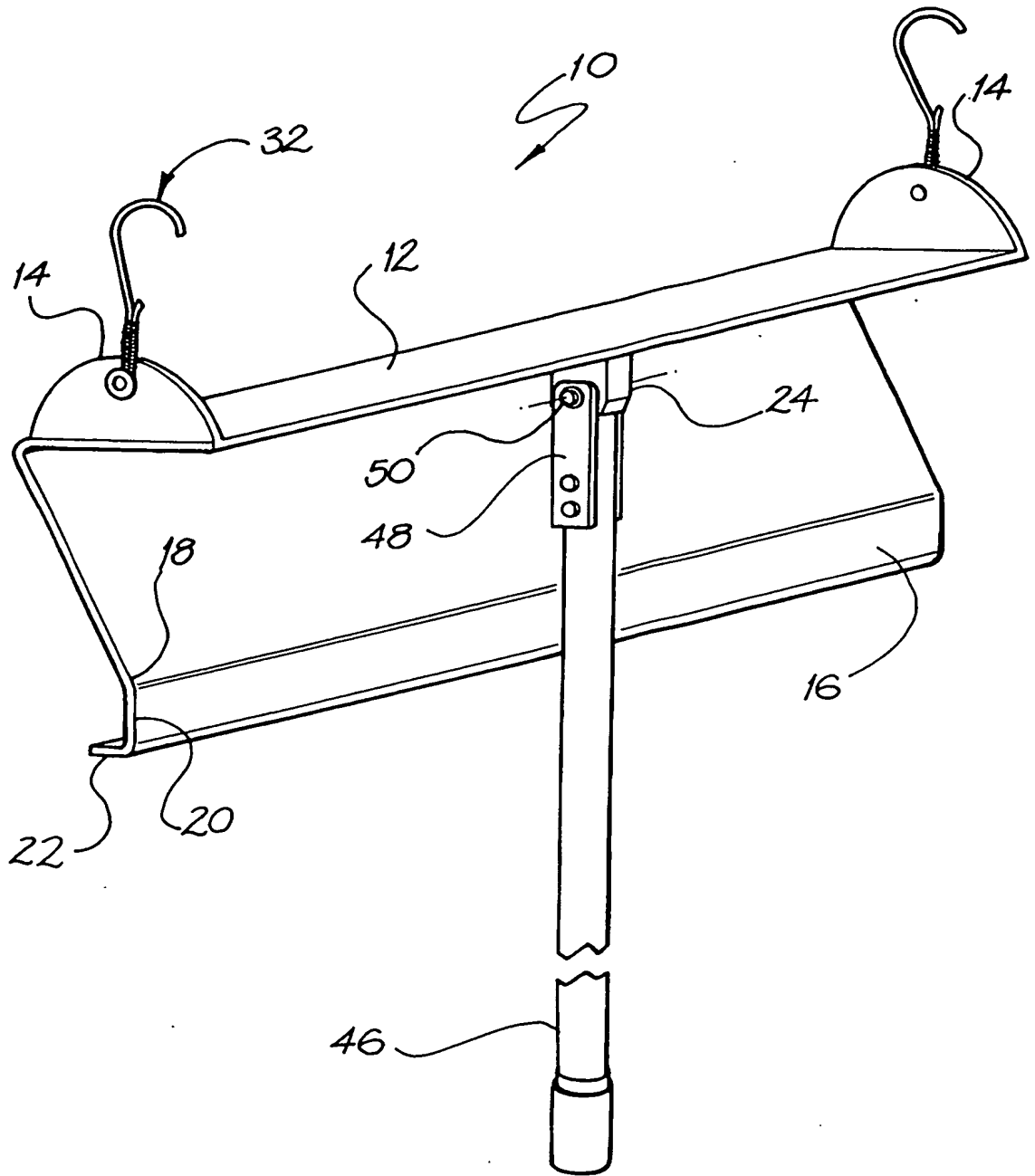


FIG. 2

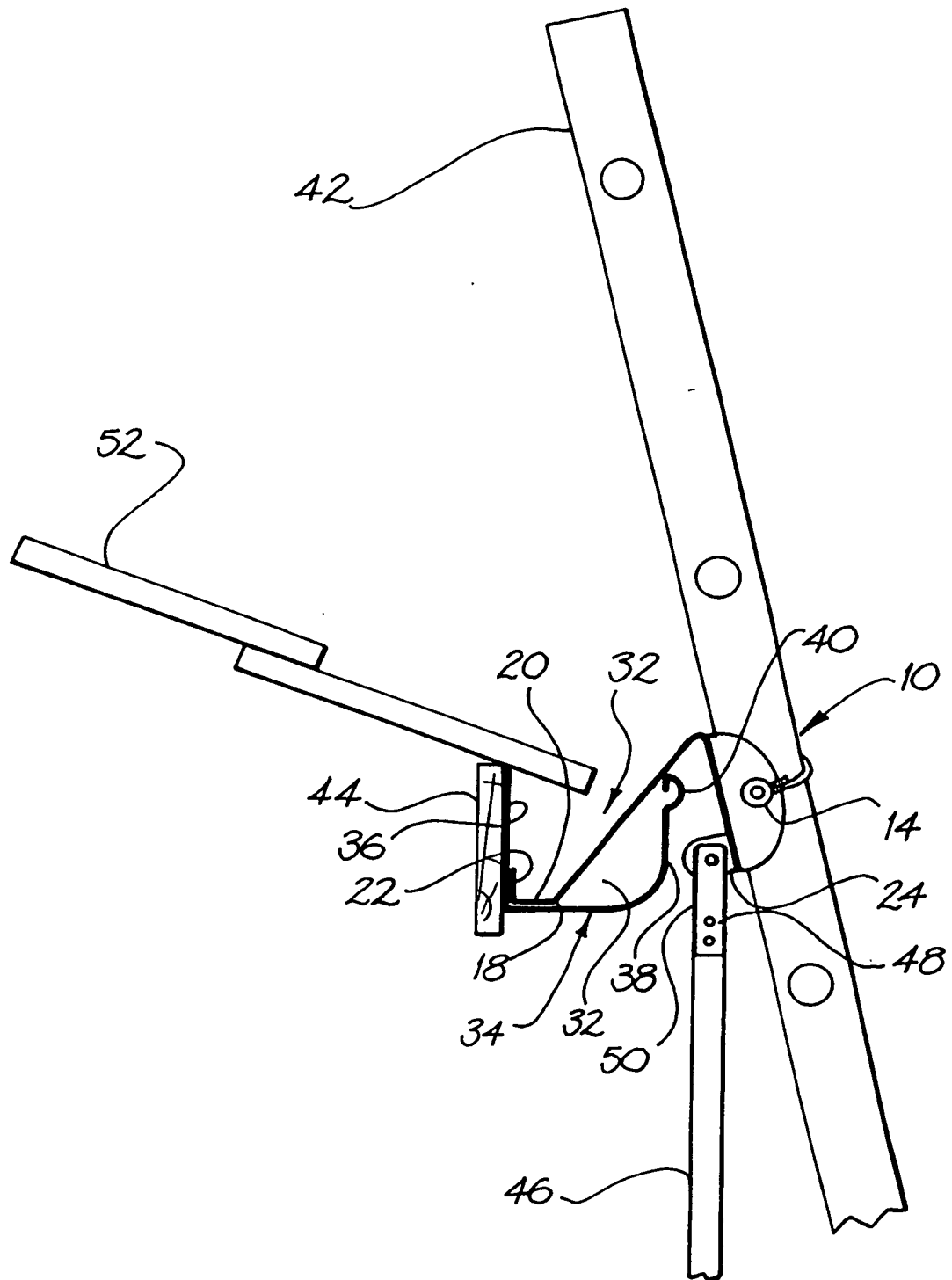


FIG. 3